

CLAIMS

1. An electromagnetic wave shielding sheet comprising:  
a transparent substrate, and  
a metal mesh layer laminated to a surface of the transparent substrate by an adhesive layer,  
wherein the metal mesh layer has a mesh part and a frame part around the mesh part, the mesh part having a plurality of openings and a plurality of line parts defining the plurality of openings,  
a metal surface is exposed at the frame part on a side opposite to the adhesive layer, and  
the plurality of openings is filled with a transparent ionizing radiation cured resin.
2. An electromagnetic wave shielding sheet according to claim 1, wherein  
surface roughness of the surface of the frame part on the side opposite to the adhesive layer is 0.5 to 1.5  $\mu\text{m}$  as a mean surface roughness value of 10 measurements, obtained in accordance with JIS-B0601 (1994 version).
3. A method for producing an electromagnetic wave shielding sheet according to claim 1 or 2, comprising the steps of:
  - (1) laminating a metal layer to a surface of a transparent substrate by a transparent adhesive layer, thereby obtaining a laminate,
  - (2) providing a mesh-patterned resist layer on the metal layer face of the laminate, etching the metal layer to remove portions thereof that are not covered with the resist layer, and removing the resist layer, thereby forming in the metal layer a mesh part and a frame part around the mesh part,
  - (3) applying liquid and transparent ionizing radiation curing resin onto the mesh part and the frame part, laminating a pattern-transfer film onto the ionizing radiation curing resin,

and applying ionizing radiation to the ionizing radiation curing resin on a side of the pattern-transfer film, thereby curing the ionizing radiation curing resin, and

(4) removing the pattern-transfer film, and removing the ionizing radiation cured resin at least on the frame part, with leaving the ionizing radiation cured resin in the openings of the mesh part.

4. A method for producing an electromagnetic wave shielding sheet according to claim 3, wherein  
the ionizing radiation is ultraviolet light, and  
the pattern-transfer film is permeable to ultraviolet light.

5. A method for producing an electromagnetic wave shielding sheet according to claim 3 or 4, wherein  
an interlayer adhesive force between the adhesive layer and the ionizing radiation cured resin layer, an interlayer adhesive force between the ionizing radiation cured resin layer and the pattern-transfer film, and an interlayer adhesive force between the ionizing radiation cured resin layer and the metal layer are smaller in that order.